

REMARKS

This Amendment After Final Rejection is submitted in response to the outstanding final Office Action, dated June 27, 2003. The present application was filed on December 23, 1999 with claims 1 through 59. Claims 39-46 were cancelled in the Response to Office Action dated May 29, 2003, in response to an election requirement. Claims 1-38 and 47-59 are presently pending in the above-identified patent application. Claims 13 and 26-30 are proposed to be amended herein.

This amendment is submitted pursuant to 37 CFR §1.116 and should be entered. The Amendment places all of the pending claims, i.e., claims 1-38 and 47-59, in a form that is believed allowable, and, in any event, in a better form for appeal. It is believed that examination of the pending claims as amended, which are consistent with the previous record herein, will not place any substantial burden on the Examiner.

Applicants note that section 706.07(a) of the Manual of Patent Examining Procedure states that:

under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).

Applicants note that, on February 11, 2003, the Examiner considered the references of the information disclosure statement submitted in this patent application and, on February 14, 2003, the Examiner completed the prior Office Action. In that Office Action, the Examiner indicated that claims 1, 3-13, 15-18, 20-38, and 47-59 were allowed and indicated that claims 2, 14, and 19 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims. In response to that Office Action, Applicants amended the claims to make them more definite in compliance with Section 112, as directed by the Examiner.

Thus, Applicants maintain that the new grounds of rejection were neither necessitated by the Applicant's amendments nor based on information submitted in the information disclosure statement. Applicants therefore respectfully request that the finality of the rejection be withdrawn in accordance with section 706.07(d) of the Manual of Patent Examining Procedure.

In the Office Action, the Examiner rejected claims 13-17 and 26-30 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner rejected claims 1, 3, 5-12, 18, 21, 22, and 47-49 under 35 U.S.C. § 102(e) as being anticipated by Zhong et al. (United States Patent Number 5,970,104) and rejected claims 24, 31-38, and 56-59 under 35 U.S.C. §103(a) as being unpatentable over Zhong et al. The Examiner also indicated that claims 50-55 are allowed and indicated that claims 2, 4, 19, 20, 23 and 25 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

Section 112 Rejections

Claims 13-17 and 26-30 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner notes that claim 13 recites the limitation "said channel having a channel memory" on line 2, claims 26-29 recite the limitation "said lower complexity cancellation algorithm," and claim 30 recites the limitation "said more significant taps." The Examiner asserts that these limitations lack antecedent basis in their respective claims.

Claims 13 and 26-30 have been amended to provide proper antecedent basis for the cited limitations. Applicants believe that these amendments address the Examiner's concerns under Section 112, and respectfully request that the rejections under Section 112, second paragraph, be withdrawn.

Independent Claims 1, 13, 18, 24, 38, 47, 50, 53, 56 and 59

Independent claims 1, 18, and 47 under 35 U.S.C. § 102(e) as being anticipated by Zhong et al. and rejected claims 24, 38, 56, and 59 under 35 U.S.C. §103(a) as being unpatentable over Zhong et al.

Regarding claims 1 and 47, the Examiner asserts that Zhong teaches steps/means for pre-computing branch metrics.

Applicants note that Zhong is directed to a decoder architecture that can be "fully parallel, fully serial, or partially parallel, partially serial." See, Abstract. Zhong teaches an architecture where a pair of serial data signals 108-1 / 108-2 are converted to parallel over a first and second bit times. A Branch Metric Table then generates the selected branch metrics 116 utilizing the converted signals. While the Branch Metric Table does generate an output based on the current

parallel data signals, it does *not* attempt to pre-compute the selected branch metrics output 116 for *future* input signals to the branch metrics unit. Independent claims 1, 13, 18, 24, 38, 47, 50, 53, 56 and 59, as amended, require *pre-computing* a branch metric.

Thus, Zhong et al. do not disclose or suggest pre-computing a branch metric, as required by independent claims 1, 13, 18, 24, 38, 47, 50, 53, 56 and 59, as amended.

Dependent Claims 2-12, 14-17, 19-23, 25-37, 48-49, 51-52, 54-55, and 57-58

Dependent claims 3, 5-12, 21, 22, and 48-49 under 35 U.S.C. § 102(e) as being anticipated by Zhong et al. and rejected claims 31-37, and 57-58 under 35 U.S.C. §103(a) as being unpatentable over Zhong et al.

Claims 2-12, 14-17, 19-23, 25-37, 48-49, 51-52, 54-55, and 57-58 are dependent on claims 1, 13, 18, 24, 47, 50, 53, and 56, respectively, and are therefore patentably distinguished over Zhong et al. because of their dependency from amended independent claims 1, 13, 18, 24, 47, 50, 53, and 56 for the reasons set forth above, as well as other elements these claims add in combination to their base claim. The Examiner already indicated that claims 51-52 and 54-55 are allowed and indicated that claims 2, 4, 19, 20, 23 and 25 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims.

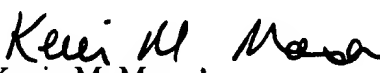
Conclusion

All of the pending claims, i.e., claims 1-38 and 47-59, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,


Kevin M. Mason
Attorney for Applicant(s)
Reg. No. 36,597
Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06824
(203) 255-6560

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